



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, Maryland 20910

JUL - 1 1996

MEMORANDUM FOR: Distribution*

FROM:

George H. Darcy
George H. Darcy
Chief, Plans and Regulations Division

SUBJECT;

Amendment 38 to the Fishery Management Plan for
Groundfish of the Gulf of Alaska

The North Pacific Fishery Management Council (Council) has submitted the subject amendment for formal agency review, approval, and implementation. Decline of the Pacific ocean perch (POP) stock prompted the Council to recommend a Rebuilding Plan for POP. The POP Rebuilding Plan provides a specific rebuilding strategy for POP stocks, based on available biological and economic information. A formula was selected to determine annually the POP total allowable catch (TAC) level. However, the formula did not provide for any flexibility in setting TAC below this amount. If approved and implemented, this amendment would allow the Council the flexibility to recommend a TAC for POP at or below the amount dictated by the POP Rebuilding Plan.

Please provide your comments (including "no comments") by August 9, 1996. If you have any questions, please call Cathey Belli at (301) 713-2344.

Attachment

*Distribution

F/CM - Surdi
F/CM1 - Fricke
F/CM2 - Darcy
GCF - Feder
GCEL - Kuruc
F/EN - McKinney
Fx3 - Swartz/Fox
GC - Johnson

OPSP - Archambault
F/PR2 - Payne
N/ORM3 - Lewsey
F/PR8 - Ostrovsky
F/RE - Everett
F/HP1 - Burgess
F/RE1 - Holliday
OGC - Cohen
Fx2 - Matlock



AMENDMENT 38 - TEXT TO AMEND THE FMP FOR GROUND FISH OF THE GULF OF ALASKA

1. In chapter 4 entitled "Management Regime," the following section is amended:

Under Section 4.2 entitled "Framework Measures"

In Section 4.2.1 entitled "Setting harvest levels" the following text is added to the end of paragraph (2):

(f) The TAC, once calculated and apportioned as outlined in the above paragraphs (a-e), may be further adjusted downward in one or more Gulf of Alaska regulatory areas or districts to accomodate the following:

(1) biological or resource conservation concerns about the Pacific ocean perch resource or associated with the Pacific ocean perch fishery that are not accounted for in the Rebuilding Plan or the annual Stock Assessment and Fishery Evaluation reports, or

(2) to maintain the TAC within the bounds of the ABC, in cases where the calculated TAC results in an amount that is higher than the ABC.

Billing Code: 3510-22

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 679

[I.D. 062596B]

RIN 0648-AH68

Groundfish of the Gulf of Alaska; Pacific Ocean Perch; Amendment
38

AGENCY: National Marine Fisheries Service (NMFS), National
Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of availability; request for comments.

SUMMARY: The North Pacific Fishery Management Council (Council)
has submitted Amendment 38 to the Fishery Management Plan for
Groundfish of the Gulf of Alaska (FMP) for Secretarial review.
Amendment 38 would provide the flexibility for the Council to
recommend a total allowable catch amount for Pacific ocean perch
(POP) below the level currently established in the FMP. NMFS is
requesting comments from the public on the proposed amendment.
Copies of the amendment may be obtained from the Council (see
ADDRESSES).

DATES: Comments on the FMP amendment should be submitted on or
before [insert date 60 days after date of filing for public
inspection with the Office of the Federal Register].

ADDRESSES: Comments on the FMP amendment should be submitted to
Ronald J. Berg, Chief, Fisheries Management Division, Alaska

Region, NMFS, P.O. Box 21668, Juneau, AK 99802-1668; Attn: Lori Gravel, or delivered to the Federal Building, 709 West 9th Street, Juneau, AK.

Copies of Amendment 38 and the environmental assessment and the economic analysis prepared for the amendment are available from the North Pacific Fishery Management Council, 605 W 4th Ave., Suite 306, Anchorage, AK 99501-2252; telephone 907-271-2809.

FOR FURTHER INFORMATION CONTACT: Kaja Brix, 907-586-7228.

SUPPLEMENTARY INFORMATION: The Magnuson Fishery Conservation and Management Act (Magnuson Act) requires that each Regional Fishery Management Council submit any fishery management plan or plan amendment it prepares to the Secretary of Commerce (Secretary) for review and approval, disapproval, or partial disapproval. The Magnuson Act also requires that the Secretary, upon receiving a fishery management plan or amendment, immediately publish a notice that the fishery management plan or amendment is available for public review and comment. The Secretary will consider the public comments received during the comment period in determining whether to approve the FMP or amendment.

Decline of the POP stock since the early period of the foreign fishery (mid 1960's) prompted the Council to recommend a rebuilding plan for POP. The Pacific Ocean Perch Rebuilding Plan (Rebuilding Plan) was established in Amendment 32 to the FMP. Details of the justification for the Rebuilding Plan can be found in the Notice of Availability for Amendment 32 (59 FR 295;

January 4, 1994). The POP Rebuilding Plan provides a specific rebuilding strategy for POP stocks, based on available biological and economic information. The Rebuilding Plan establishes a formula to determine annually the POP TAC, which is then apportioned among Gulf of Alaska (GOA) regulatory areas based on biomass distribution. However, the amendment does not provide for any flexibility to reduce the TAC below the amount specified by the formula.

Under the current Rebuilding Plan, the potential exists for the calculated TAC to be greater than the acceptable biological catch (ABC), which would be inconsistent with the current management practice for other groundfish stocks. The Council has also expressed concern that it does not have the flexibility to lower the POP TAC under the Rebuilding Plan to accommodate other resource conservation concerns. Therefore, the Council adopted Amendment 38 to the FMP at its December 1995 meeting. Amendment 38 would not prescribe a TAC lower than that specified by the formula; however, it would allow the Council the flexibility to recommend a TAC below the level of the specified formula in one or more GOA regulatory areas or districts. To be consistent with the Rebuilding Plan for POP, any downward adjustment of TAC would be based on biological or resource conservation concerns.

Under the Rebuilding Plan, an ABC is set for POP in the GOA and this ABC is apportioned among regulatory areas based on biomass distribution. The TAC is determined using the formula and is then apportioned to each regulatory area according to the

percentage biomass distribution used for the ABC apportionment.

Under Amendment 38, once the TAC is apportioned among regulatory areas, as specified by the current FMP, the Council could recommend a further downward adjustment of the POP TAC in one or more of the GOA regulatory areas or districts. Any downward adjustments would be based on biological or resource conservation concerns about the POP resource or associated with the POP fishery that are not accounted for in the Rebuilding Plan or the annual Stock Assessment and Fishery Evaluation (SAFE) reports, or to maintain the TAC below the ABC. NMFS will consider information provided by a recognized scientific body such as the Council's Scientific and Statistical Committee, Plan Team, or by NMFS stock assessment scientists regarding any downward adjustment of the TAC.

The FMP amendment would only give the Council the alternative of recommending a lower POP TAC in the annual specifications process to address biological or resource conservation concerns that are not addressed under the Rebuilding Plan or SAFE reports. If socioeconomic concerns exist with respect to the management of the POP fishery, particularly in the Eastern GOA, the Council would need to consider a separate amendment to address these issues.

Amendment 38 is intended to improve conservation and management of POP and to further the goals and objectives of the FMP. No regulatory changes are necessary to implement this FMP amendment. The TAC would be considered for implementation during

the annual specification process under regulations at
§ 679.20(c).

Authority: 16 U.S.C. 1801 et seq.

Dated: June 27, 1996

Richard W. Surdi

Acting Director, Office of Fisheries Conservation
and Management

National Marine Fisheries Service

**Environmental Assessment
of Alternatives to Amend the Gulf of Alaska
Pacific Ocean Perch Rebuilding Plan**

**Prepared by
National Marine Fisheries Service**

June 1996

Executive Summary

Decline of the Pacific ocean perch (POP) stock since the early period of the foreign fishery prompted the North Pacific Fishery Management Council (Council) to recommend a rebuilding plan for POP. The POP Rebuilding Plan was contained in Amendment 32 to the Fishery Management Plan for Groundfish of the Gulf of Alaska (FMP), which was approved by the Secretary of Commerce in 1993. The POP Rebuilding Plan provides a specific rebuilding strategy for POP stocks, based on available biological and economic information. An algorithm, or formula, was selected to determine annually the POP total allowable catch (TAC). However, the amendment did not provide for any flexibility in setting TAC below this amount. In December 1994, the Council requested an analysis of alternatives for modifying the FMP to allow this flexibility.

Three alternatives are considered:

Alternative 1: Status quo. Maintain the current procedure for specifying the annual TAC amounts for POP as detailed in the FMP. The current means of calculating the TAC was part of the policy alternative adopted by the Council under Amendment 32, the Rebuilding Plan.

Alternative 2: [The Preferred Alternative]. Amend the FMP to allow the Council to recommend a POP TAC *at or below* the amount dictated by the Rebuilding Plan. Any downward adjustment in the TAC from the Rebuilding Plan amount would be based on biological or resource conservation concerns about the POP resource or associated with the POP fishery that are not accounted for in the Rebuilding Plan or the annual Stock Assessment and Fishery Evaluation (SAFE) reports or to maintain the TAC within the bounds of the acceptable biological catch (ABC), in cases where the calculated TAC results in an amount that is higher than the ABC. The current formula for specifying the TAC would be the upper-bound limit and the POP TAC could be annually specified at or below this level in one or more of the Gulf of Alaska (GOA) regulatory areas or districts.

Alternative 3: Re-evaluate the Rebuilding Plan to reconsider the Council's intended harvest strategy. The Council would direct staff to complete an analysis of alternatives to the Rebuilding Plan should this alternative be chosen.

The primary difference between alternative 2 and 3 is that Alternative 2 would not change the general direction established by the Rebuilding Plan except to allow the Council flexibility in recommending annual GOA POP TACs if the Council identified specific biological or conservation issues that were not adequately addressed by the Rebuilding Plan TAC level. However, if the Council believes that the general direction of the Rebuilding Plan, which will allow for increasing POP TAC levels as the POP biomass increases, does not reflect how they wish to pursue POP rebuilding in the future, Alternative 3 would provide for a re-evaluation of the Rebuilding Plan to reconsider alternative harvest strategies.

If socioeconomic concerns exist with respect to the management of the POP fishery, particularly in the Eastern GOA, Alternative 3 would allow for a separate FMP amendment

to address these issues separately from the conservation issues addressed under the POP Rebuilding Plan.

The economic impact of a particular annual POP TAC, under Alternative 2, will depend on the difference between the TAC as determined by the Rebuilding Plan formula, and the amount recommended by the Council. POP is harvested by trawl vessels; therefore, any reduction in TAC from the Rebuilding Plan amount will result in a loss in revenue to trawl catcher/processors currently participating in the POP fishery, that may or may not be made up in the future. Unless these losses are offset by other benefits identified by the Council and NMFS, the reduction in TAC would result in a net loss.

The economic value of a directed fishery for POP derives from the value of all species harvested - including species like sablefish and some rockfishes which are themselves on "bycatch-only" status and may be harvested only in directed fisheries for other species. Harvests during the 1995 directed trawl fisheries for POP (Table 4) illustrate the importance of these other bycatch species. The estimated wholesale processed product value of the 1995 directed trawl fisheries for POP was about \$6.7 million. POP contributed about \$3 million to the value, other rockfish approximately \$1.9 million, and sablefish bycatch about \$1.6 million.¹ As discussed in Section 3.0, the wholesale value of the catch overstates the potential economic loss because it is not adjusted for operating costs.

1.0 INTRODUCTION

The groundfish fisheries in the Exclusive Economic Zone (EEZ) (3 to 200 miles offshore) in the GOA are managed under the Fishery Management Plan for Groundfish of the Gulf of Alaska (GOA FMP). The GOA FMP was prepared by the Council under the Magnuson Fishery Conservation and Management Act (Magnuson Act). It was approved by the Secretary of Commerce and became effective in 1978.

Actions taken to amend Fishery Management Plans or implement other regulations governing the groundfish fisheries must meet the requirements of Federal laws and regulations. In addition to the Magnuson Act, the most important of these are the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), the Marine Mammal Protection Act (MMPA), Executive Order (E.O.) 12866, and the Regulatory Flexibility Act (RFA).

NEPA, E.O. 12866, and the RFA require a description of the purpose and need for the proposed action as well as a description of alternative actions which may address the problem. This information is included in Section 1. Section 2 contains information on the biological and environmental impacts of the alternatives as required by NEPA. Impacts on

¹The wholesale processed product value overestimates the net economic value of the POP directed fishery because adjustments have not been made for costs of harvesting and processing.

endangered species and marine mammals are also addressed in this section. This Environmental Assessment (EA) addresses alternatives to amend the POP Rebuilding Plan in the GOA FMP.

1.1 Purpose of and Need for the Action

Decline of the POP stock since the early period of the foreign fishery (early 1960's) prompted the Council to request an analysis of alternative rebuilding strategies for POP. This analysis was presented as Amendment 32 to the GOA FMP in 1993 (November 8, 1993). The Council adopted a particular rebuilding strategy, based on available biological and economic information. This rebuilding plan contains a formula, specified in the FMP, for determining the TAC. The amendment does not provide for any flexibility in recommending a TAC at a level other than that which is dictated by the formula.

The Council is concerned that the TAC level in a given year, as specified in the FMP, may be inconsistent with the Council's intent for rebuilding the POP resource. Under the current Rebuilding Plan, the potential also exists for the calculated TAC to be greater than the ABC; were this to occur it would be inconsistent with the current management practice for other groundfish stocks. At its December 1994 meeting, the Council requested that NMFS prepare an analysis for providing the flexibility to lower the TAC below the level specified in the FMP, which is similar to the latitude that the Council has to lower TAC for other species. The intent is to allow the Council to recommend a TAC amount that could accommodate unaccounted for biological or resource conservation concerns about the POP resource or associated with the POP fishery and/or to keep the POP TAC within the bounds of the ABC.

This document presents alternatives for modifying the Rebuilding Plan.

1.2 Rockfish Management

Amendment 32 to the GOA FMP established a plan to rebuild stocks of the rockfish POP (Sebastes alutus) in the GOA. POP is a highly valued groundfish. It was heavily exploited by a foreign trawl fleet from the early 1960's until the mid-1980's. Thereafter, a domestic at-sea processing fleet harvested POP at a substantially lower rate. Catches of POP peaked in 1965 when an estimated 350,000 mt were harvested by the foreign fleet; catches declined sharply in the late 1960's. From 1961-77, annual POP landings averaged over 40,000 mt; after 1977, landings averaged 6,000 mt. In the domestic fishery, POP was managed as part of a larger slope rockfish assemblage of about 20 species until 1991, when POP was established as a separate target species category to prevent possible overfishing.

As a result of increased concern about the declined status of POP stocks, biomass assessment methodology has been improved, POP has been managed as a single species and domestic harvest levels have been reduced. The 1994 TAC of 2,550 mt, derived from the rebuilding plan calculations, was available only as incidental catch in other groundfish fisheries, except

for a short-term directed fishery in the Eastern GOA. In 1995 the TAC for POP as determined by the Rebuilding Plan was 5,630 mt, enough to support a directed fishery.

The original analysis for Amendment 32 examined various exploitation strategies for POP, including a bycatch-only harvest policy. The analysis is presented in the EA/RIR to Amendment 32 (November 8, 1993). After examining biological and socioeconomic information, the Council adopted a rebuilding plan for POP that set the harvest as outlined under Alternative 1.

Under the Rebuilding Plan, an ABC is set for this species for the GOA and this ABC is apportioned among regulatory areas based on the biomass distribution. The TAC is determined using the formula and is then apportioned to each regulatory area according to the percentage biomass distribution used for the ABC apportionment. However, some Council members continue to express conservation concerns related to the rebuilding of the POP resource and about the lack of flexibility to lower the TAC to accommodate those concerns.

Available scientific information indicates that harvest of POP at the rates prescribed under the current rebuilding plan is not jeopardizing the rebuilding of POP. The TAC amount recommended for 1995, and for 1996, is consistent with the rebuilding plan as chosen by the Council.

Although the current rebuilding plan was chosen by the Council to achieve optimum yield and proper conservation and management of POP in the GOA, there may be circumstances under which optimum yield would not be achieved with the current rebuilding plan.

1.3 Historical Catch

Tables 1 through 3 present recent catch information for POP. Additional historical catch information was presented in the EA/RIR for the Rebuilding Plan. Table 1 summarizes POP catch by gear type from 1992 through 1995. Tables 2 and 3 summarize the 1994 and 1995 POP catch by target fishery and gear. Target fishery designations on the NMFS in-season database group all rockfish directed fisheries together rather than distinguishing among directed fisheries for the individual rockfish species groups (see Table 4 in Section 3 for further detail on the 1995 POP directed fishery).

Table 1. Blend Estimates of Pacific ocean perch by gear type in the Gulf of Alaska, (retained and discarded), in metric tons, 1992-1995.

	TRAWL		HOOK & LINE		POT		TOTAL - all gear types		
	Retained	Discard	Retained	Discard	Retained	Discard	Retained	Discard	TOTAL
1992	4,720	1,812	6	0.40	0	0.09	4,726	1,812	6,538
1993	426	1,632	3	0.03	0	0	429	1,632	2,061
1994	769	1,083	2	0	0	0	771	1,083	1,854
1995	4,637	1,147	0.24	1	0.06	0.20	4,637	1,147	5,786

Source: Blend estimates of catch as of 11/2/95.

Table 2. 1994 Blend estimates of Pacific ocean perch catch in the Gulf of Alaska by target fishery (metric tons).

Gear	Target	WGDA			CGOA			EGOA			TOTAL - GOA		
		Retained	Discard	Total	Retained	Discard	Total	Retained	Discard	Total	Retained	Discard	Total
Trawl	Rockfish	34	45	79	54	261	315	554	187	741	642	493	1,135
	Atka mackerel	0	74	74	0	1	1	0	0	0	0	75	75
	Pollock	<1	<1	<1	0	3	3	3	0	3	3	3	6
	Pacific cod	<1	11	11	10	6	16	0	0	0	10	17	27
	Deepwater flat	0	0	0	32	306	338	1	22	23	33	328	361
	Shallow water flat	0	0	0	2	11	13	0	0	0	2	11	13
	Rex sole	0	0	0	41	151	192	0	0	0	41	151	192
	Flathead sole	1	0	1	35	0	35	0	0	0	36	0	36
	Unknown	0	0	0	2	5	7	0	0	0	2	5	7
Total - Trawl		35	130	165	175	744	920	557	209	767	769	1,083	1,852
Hook and line		<1	0	<1	1	0	1	1	0	1	2	0	2
Pot		0	0	0	0	0	0	<1	0	<1	<1	0	<1
Total all targets		35	130	165	176	744	921	558	209	768	771	1,083	1,854

Source: Blend estimates of catch as of 8/29/95.

Table 3. 1995 Blend estimates of Pacific ocean perch catch in the Gulf of Alaska by target fishery
(metric tons)

Gear	Target	WGOA			CGOA			EGOA			TOTAL		
		Retained	Discard	Total	Retained	Discard	Total	Retained	Discard	Total	Retained	Discard	Total
Trawl	Rockfish	1,331	71	1,402	1,601	447	2,048	1,605	109	1,714	4,537	627	5,164
	Atka mackerel	0	0	0	0	59	59	0	0	0	0	59	59
	Bottom pollock	2	2	4	14	<1	14	0	0	0	16	2	18
	Pacific cod	6	4	10	22	25	47	0	0	0	28	29	57
	Deepwater flat	0	0	0	30	59	89	0	14	14	30	73	103
	Shallow water flat	<1	5	5	0	28	28	0	0	0	0	33	33
	Rex sole	0	0	0	10	310	320	0	0	0	10	310	320
	Flathead sole	0	1	1	<1	4	4	0	0	0	0	5	5
	Unknown	<1	0	<1	16	10	26	0	1	0	16	10	26
Total - Trawl		1,339	83	1,422	1,693	942	2,636	1,605	124	1,728	4,637	1,147	5,786
Hook and Line		0	<1	<1	<1	1	1	<1	0	0	<1	1	1
Pot		0	0	0	<1	<1	<1	<1	0	<1	<1	<1	<1
Total all targets		1,339	83	1,422	1,693	943	2,637	1,605	124	1,728	4,637	1,149	5,787

Source: Blend estimates of catches as of 11/2/95.

1.4 Alternatives Considered

Alternative 1: Status quo. Maintain the current procedure for specifying the annual TAC amounts for POP as detailed in the FMP. The current means of calculating the TAC was part of the policy alternative adopted by the Council under Amendment 32, the Rebuilding Plan.

Amendment 32 to the FMP established the procedure for deriving the annual GOA TACs for POP. POP stocks are considered to be rebuilt when the total biomass of mature females is equal to or greater than Bmsy. Annual TACs, under the current FMP, are established as follows:

- (a) Determine the current biomass, Bmsy, and the optimal fishing mortality rate;
- (b) Determine the fishing mortality rate half way between the optimal fishing mortality rate and the fishing mortality rate estimated to be sufficient to supply unavoidable bycatch of POP based on 1992 bycatch rates;
- (c) When the current biomass of mature females is less than Bmsy, adjust the resultant fishing mortality rate in (b) by the ratio of current biomass to Bmsy so that when Bmsy is attained, the fishing mortality rate will be the optimal fishing mortality rate;
- (d) The GOA TAC of POP is the amount of fish resulting from the adjusted fishing mortality rate in (c); and
- (e) The TAC is apportioned among regulatory area in proportion to POP biomass distribution.

Alternative 2: [The Preferred Alternative]. Amend the FMP to allow the Council to recommend a POP TAC *at or below* the amount dictated by the Rebuilding Plan. Any downward adjustment in the TAC from the Rebuilding Plan amount would be based on biological or resource conservation concerns about the POP resource or associated with the POP fishery that are not accounted for in the Rebuilding Plan or the annual SAFE reports, or to maintain the TAC within the bounds of the ABC, in cases where the calculated TAC results in an amount that is higher than the ABC. The current formula for specifying the TAC would be the upper-bound limit and the POP TAC could be annually specified at or below this level in one or more of the GOA regulatory areas or districts.

As with other species, NMFS would consider the Council's TAC recommendations during the annual specification process. If the Council chooses to recommend a POP TAC lower than the Rebuilding Plan amount, the administrative record must include the additional biological concerns that lead to this recommendation which were not addressed by the Rebuilding Plan TAC amount. In addition to the Council's recommendation, NMFS also will consider scientific information presented by the Plan Team, the Council's Scientific and Statistical Committee, as well as other sources of biological information.

The Council may wish to have the flexibility to adjust the TAC downwards because the possibility exists under the current FMP for the ABC to be set lower than the TAC. The ABC for POP is currently calculated using F_{opt} but another F level could be chosen to calculate the ABC, resulting in an ABC lower than the TAC.

Alternative 2 [The Preferred Alternative] does not, in itself, dictate a lower TAC amount. The proposed FMP amendment would only give the Council the authority to recommend a lower POP TAC in the annual specifications process, as can be done with other species' TACs, to address biological or conservation concerns that are not adequately addressed under the Rebuilding Plan. If socioeconomic concerns exist with respect to the management of the POP fishery, particularly in the Eastern GOA, the Council could consider a separate amendment to address these issues separately from the conservation issues addressed under the POP Rebuilding Plan.

Alternative 3: Re-evaluate the current Rebuilding Plan to reconsider the Council's intended harvest strategy.

If the Council believes that the existing POP Rebuilding Plan does not adequately address its biological concerns, or is not meeting other POP rebuilding goals, the Council could consider re-evaluation of the existing Rebuilding Plan beyond the amendments proposed in Alternative 2.

2.0 NEPA REQUIREMENTS: ENVIRONMENTAL IMPACTS OF THE ALTERNATIVES

An environmental assessment (EA) is required by NEPA to determine whether the action considered will result in significant impact on the human environment. The environmental analysis in the EA provides the basis for this determination and must analyze the intensity or severity of the impact of an action and the significance of an action with respect to society as a whole, the affected region and interests, and the locality. If the action is determined not to be significant based on an analysis of relevant considerations, the EA and resulting finding of no significant impact would be the final environmental documents required by NEPA. An environmental impact study must be prepared for major Federal actions significantly affecting the human environment.

An EA must include a brief discussion of the need for the proposal, the alternatives considered, the environmental impacts of the proposed action and the alternatives, and a list of document preparers. The purpose and alternatives were discussed in Sections 1.1 and 1.2, and the list of preparers is in Section 5. This section contains the discussion of the environmental impacts of the alternatives including impacts on threatened and endangered species and marine mammals.

2.1 Environmental Impacts of the Alternatives

The environmental impacts generally associated with fishery management actions are effects resulting from 1) harvest of fish stocks which may result in changes in food availability to predators, changes in the population structure of target fish stocks, and changes in community structure; 2) changes in the physical and biological structure of the benthic environment as a result of fishing practices, e.g., effects of gear use and fish processing discards; and 3) entanglement/entrapment of non-target organisms in active or inactive fishing gear. A summary of the effects of the 1995 and 1996 groundfish TAC amounts on the biological environment and associated impacts on marine mammals, seabirds, and other threatened or endangered species are discussed in the final environmental assessments for the 1995 and 1996 groundfish TAC specifications (NMFS 1995a, 1996). Alternative 2 [The Preferred Alternative] would provide the flexibility to lower the TAC below the level specified in the current FMP text to address resource conservation concerns or to accommodate TAC within the bounds of the ABC.

If the TAC were specified lower than the amounts calculated in the FMP for a given year in a manner that reduced overall trawl activity, the impacts of trawling on the benthic structure could be lessened. However, the destructive impact to the benthic environment that might be contributed by trawling specifically for POP, whose TAC is relatively low, would probably be minimal.

Some concerns were expressed that the nature of the trawl participants may change, potentially indirectly altering the observer coverage for the POP fishery, if the TAC were lowered to a level that would create a bycatch only fishing situation. However, under either the FMP calculated TAC or another TAC that would represent a directed fishing situation or a bycatch only amount, the level of catch monitoring, by observers, should remain similar. During the directed fishery for POP that was executed in 1995, all vessels had 100 percent observer coverage except for one vessel that had 30 percent observer coverage. Under the situation of a bycatch only fishery (i.e., the 1994 fishing situation), all vessels that caught POP had 100 percent observer coverage except for 4 vessels with 30 percent observer coverage.

To determine any impacts of Alternative 3, specific rebuilding strategies, which are beyond the scope of this document, would need to be identified.

In an analysis presented to the Council in April 1995, NMFS examined the situation of a TAC set at 2,550 mt (i.e., the 1994 TAC amount that supported a bycatch only fishery) and determined that that level would provide little additional benefit in terms of the timing or rate of POP rebuilding (NMFS 1995b, Appendix 1) compared to a TAC that followed the Rebuilding Plan formula.

2.2 Impacts on Endangered, Threatened or Candidate Species Under the ESA

Species that are listed as threatened or endangered, or are candidates or proposed for listing under the ESA, may be present in the Bering Sea and Aleutian Islands (BSAI) and GOA. Additionally, non-listed species, particularly seabirds, also occur in those areas and may be impacted by fishing operations. A list of species and a detailed discussion regarding life history and potential impacts of the 1996 groundfish fisheries of the BSAI and GOA on marine species can be found in an EA for the 1996 TAC specifications for the GOA and BSAI (NMFS 1996). Insofar as this proposed amendment would help prevent groundfish harvests in excess of TACs and PSC mortality in excess of designated limits, fishing activities under any of the alternatives would not be expected to cause any adverse effects additional to those noted in the EA.

2.2.1 Salmon

Listed species of salmon, including the Snake River sockeye salmon (O. nerka), fall chinook and spring/summer chinook salmon (both Oncorhynchus tshawytscha) may be present in the BSAI or GOA. These areas are believed to be outside the range of another listed species, the Sacramento River winter-run chinook salmon. A Biological Opinion conducted on effects of the BSAI and GOA groundfish fisheries concluded that these fisheries are not likely to jeopardize the continued existence of endangered or threatened Snake River salmon species (NMFS 1994c). None of the alternatives considered are expected to adversely affect any listed salmon in a manner not already considered in previous consultations.

2.2.2 Seabirds

Listed or candidate species of seabirds include the endangered short-tailed albatross (Diomedea albatrus), the threatened spectacled eider (Somateria fischeri), and the candidate (category 1) Steller's eider (Polysticta stelleri), or (category 2) marbled murrelet (Brachyramphus marmoratus), red-legged kittiwake (Rissa brevirostris) or Kittlitz's murrelet (Brachyramphus brevirostris). A formal consultation conducted by the U.S. Fish and Wildlife Service (USFWS) on the potential impacts of groundfish fisheries and subsequent informal consultation on impacts of 1994 groundfish fisheries on these species concluded that groundfish fisheries adversely affect, but do not jeopardize, the existence of the short-tailed albatross (USFWS 1989, 1994) if the incidental take allowance of up to two short-tailed albatrosses per year was not exceeded. The informal consultation also concluded that groundfish fisheries were not likely to adversely affect the spectacled eider, Steller's eider, or marbled murrelet. The USFWS did not comment on remaining candidate species at that

time. None of the alternatives considered are expected to adversely affect any listed or candidate seabirds in a manner not already considered in previous consultations.

2.2.3 Marine Mammals

As with salmon and seabirds listed under the ESA, fishing activities under this proposed action are not likely to impact the threatened Steller sea lion (Eumetopias jubatus), in a manner, or to an extent, not previously considered in informal section 7 consultations for 1994 groundfish fisheries (NMFS, 1994d,e).

Other listed marine mammals include the endangered fin whale (Balaenoptera physalus), sei whale (Balaenoptera borealis), humpback whale (Megaptera novaeangliae), sperm whale (Physeter catodon), northern right whale (Balaena glacialis), blue whale (Balaenoptera musculus) and Steller sea lion (Eumetopias jubatus). None of these species are anticipated to be adversely affected by this proposed amendment.

2.3 Impacts on Marine Mammals not listed under the ESA

Marine mammals not listed under the ESA that may be present in the BSAI or GOA include cetaceans, [minke whale (Balaenoptera acutorostrata), killer whale (Orcinus orca), Dall's porpoise (Phocoenoides dalli), harbor porpoise (Phocoena phocoena), Pacific white-sided dolphin (Lagenorhynchus obliquidens), and the beaked whales (e.g., Berardius bairdii and Mesoplodon spp.)] as well as pinnipeds [northern fur seals (Callorhinus ursinus), and Pacific harbor seals (Phoca vitulina)] and the sea otter (Enhydra lutris). As previously mentioned, a list of species and detailed discussion regarding life history and potential impacts of the 1995 and 1996 groundfish fisheries of the BSAI and GOA on those species can be found in an EA conducted on the 1995 and 1996 Total Allowable Catch Specifications for the GOA and BSAI (NMFS 1995a, 1996). None of the alternatives considered are expected to adversely affect any listed or candidate marine mammals in a manner not already considered in previous consultations.

2.4 Coastal Zone Management Act

Each of the alternatives would be conducted in a manner consistent, to the maximum extent practicable, with the Alaska Coastal Zone Management Program within the meaning of Section 307(c)(1) of the Coastal Zone Management Act of 1972 and its implementing regulations.

2.5 Conclusions or Finding of No Significant Impact

None of the alternatives are likely to significantly affect the quality of the human environment; preparation of an environmental impact statement for selection of any of the alternatives as the proposed action would not be required by Section 102(2)(C) of the National Environmental Policy Act or its implementing regulations.

3.0 ECONOMIC IMPACTS OF THE ALTERNATIVES

Under Alternative 1 (status quo), the Council would determine the GOA POP TAC based on the procedures outlined in the Rebuilding Plan. Under Alternatives 2 and 3, the TAC-setting procedures in the Rebuilding Plan would be amended. Alternative 2 [**The Preferred Alternative**] would provide the Council the authority to recommend TACs below the amount determined by the Rebuilding Plan formula, provided sufficient biological or conservation justification could be made for the adjustment.

Alternative 2 provides for a downward adjustment in the POP TAC that could range from zero to the full amount of the POP TAC specified by the Rebuilding Plan. At some point in this range, the TAC would not be sufficient to support a directed fishery for POP. In this case, NMFS would place POP on "bycatch-only" status - meaning that POP could be harvested only as bycatch in other directed fisheries. The exact level of POP TAC that would result in a "bycatch-only" status for POP depends on how much POP would be expected to be harvested in other groundfish fisheries, an amount which will vary depending on the TAC for other species and on fishing effort.

Catch and value information from the 1995 fisheries can be used to illustrate the economic value associated with the POP fishery when it is a directed fishery and POP when it is caught only as bycatch in other fisheries. Both components existed in the 1995 fishery. In 1995, the Rebuilding Plan specified a TAC of 5,630 mt. As a result, directed fisheries occurred in the Western Gulf from July 3 to July 20, in the Central Gulf from July 3 to July 6, and in the Eastern Gulf from July 3 to July 9 and from October 13 to 16. Nineteen trawl catcher/processors participated in these fisheries (7 in WGOA, 11 in CGOA, and 12 in EGOA). All of these catcher/processors except one was 100 percent observed.

The economic value of the 1995 POP TAC is derived from two elements: (1) the value of POP harvested as bycatch in other groundfish fisheries, and (2) the value of ALL species, including POP itself, harvested in the POP directed fishery. The total POP

harvest in 1995 was 5,787 mt (Table 2) of which 4,108 mt were retained in the directed fishery for POP (Table 4) and 529 mt were retained as bycatch in other GOA groundfish fisheries.

The economic value of a directed fishery for POP derives from the value of all species harvested - including species like sablefish and some rockfishes which are themselves on "bycatch-only" status and may be harvested only in directed fisheries for other species. Harvests during the 1995 directed trawl fisheries for POP (Table 4) illustrate the importance of these other bycatch species. The estimated wholesale processed product value of the 1995 directed trawl fisheries for POP was about \$6.7 million. POP contributed about \$3 million to the value, other rockfish approximately \$1.9 million, and sablefish bycatch about \$1.6 million.²

The estimated wholesale value of the bycatch of POP in other groundfish fisheries in 1995 was \$397,000.³

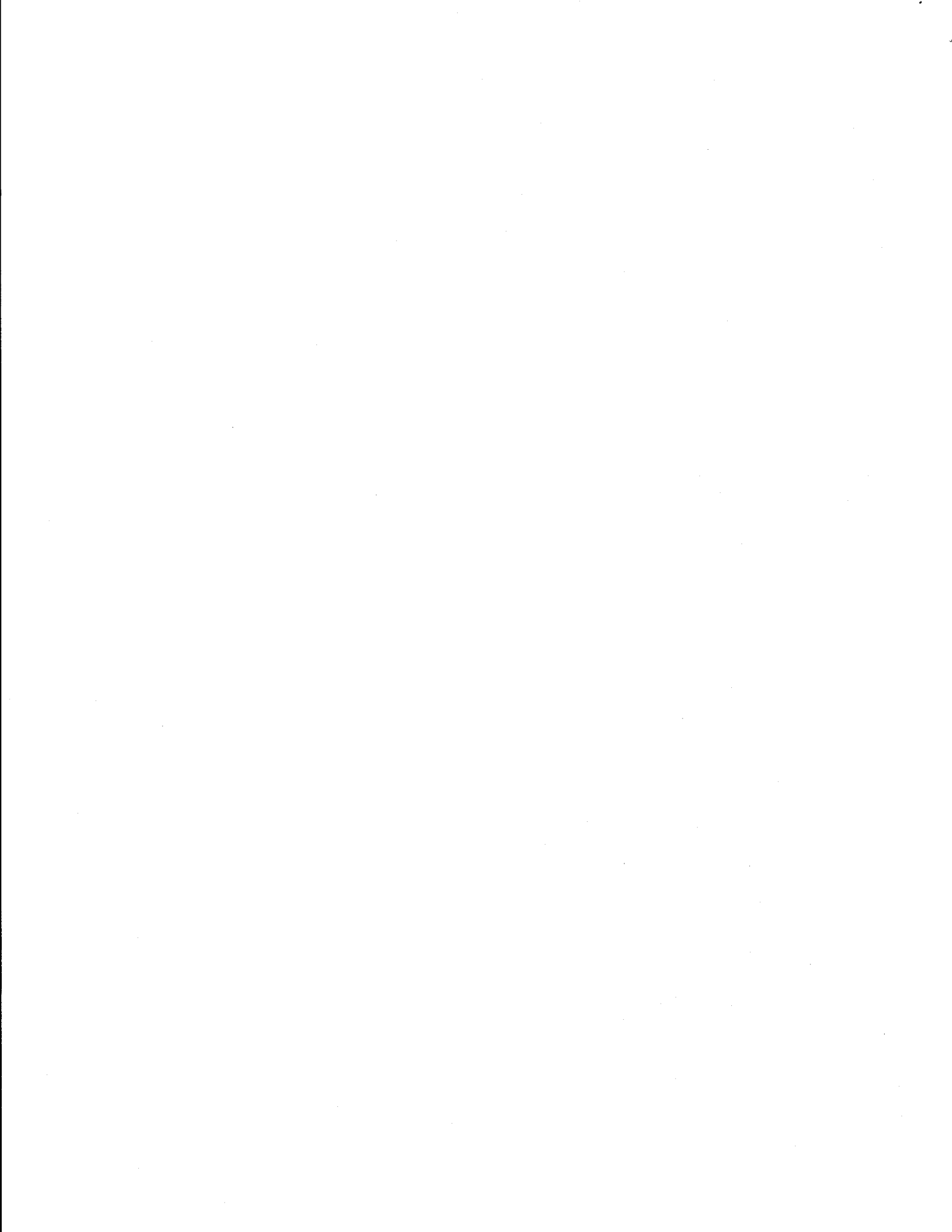
If, in 1995, the Council had elected to designate POP as bycatch-only, none of the POP would have been caught and most of the other groundfish in the POP directed fishery would not have been caught. The value of the POP TAC would have been just the bycatch component (\$397,000) caught in other fisheries. The difference between the bycatch only scenario and the full rebuilding plan (\$6.7 million less harvesting and processing costs) would have been foregone.

Unless the economic losses associated with a downward adjustment in POP TAC are offset by other benefits identified by the Council and NMFS, the reduction in TAC would result in net economic losses. In an analysis presented to the Council in April 1995, NMFS examined the alternative of a TAC set at 2,550 mt (which was the 1994 TAC amount that resulted in "bycatch-only" status for POP) and determined that this TAC would provide little additional benefit in terms of the timing or rate of POP rebuilding compared to a TAC that followed the Rebuilding Plan formula (NMFS 1995b, Appendix 1). If this were the case, the value of the catch foregone by a reduction in the POP TAC would not be made up by increased catch at an earlier date in the future. As the difference between the TAC allowed under the Rebuilding Plan and an adjusted TAC increases in future years, economic losses would increase.

Even if faster POP rebuilding occurs as a result of lower TACs, economic losses may still occur in the form of trade-offs between catch now and catch in the future. In general, a

²The wholesale processed product value overestimates the net economic value of the POP directed fishery because adjustments have not been made for costs of harvesting and processing.

³529 mt x 2205 lbs/mt x .50 PRR x \$0.68/lb.



higher economic value is placed on catch in the near term because current participants are able to realize and reinvest economic returns sooner and because current participants are not assured that they will be the people benefiting from future increased catches of POP. For those fishermen who currently do not target on POP, but would in the future, an allocation of catch between the present and the future represents an economic benefit.

The economic impacts of Alternative 3 would depend on additional alternatives identified in re-evaluation of the Rebuilding Plan.

Table 4. Estimated catch (mt), utilization (mt), and value (\$) of the 1995 directed trawl fisheries for Pacific Ocean perch in the Gulf of Alaska.

Species	WGOA		CGOA		EGOA		Gulf of Alaska Total		
	Retained	Discard	Retained	Discard	Retained	Discard	Retained	Discard	Total
POP	1,331	71	1,290	52	1,487	89	4,108	212	4,321
DSR	1	1	3	4	3	9	7	14	20
Northern Rock.	44	4	147	17	23	7	214	29	243
Pelagic Shelf	38	1	131	9	217	11	386	20	406
Slope Rockfish	1	18	23	105	78	128	103	251	354
SRRE	90	3	136	48	154	165	380	215	596
Thornyhead	42	11	31	18	50	20	123	49	172
Total Rockfish	1,547	109	1,762	253	2,012	428	5,321	791	6,112
Sablefish	60	2	149	53	148	55	357	110	467
Pacific Cod	4	32	14	37	5	4	22	73	95
Atka Mackerel	109	16	0	0	1	1	110	16	126
DW Flat	9	2	19	13	2	8	30	22	52
Flathead Sole	0	1	2	0	1	0	3	2	5
Rex Sole	3	5	28	6	3	3	33	14	48
SW Flat	0	0	0	4	2	0	3	4	7
Pollock	0	62	1	9	0	21	1	92	93
Arrowtooth	61	73	107	146	49	197	218	415	633
Other	0	11	2	9	0	25	2	45	47
All Groundfish	1,793	312	2,084	530	2,223	742	6,101	1,584	7,685
									6,739,610

1/ Estimated wholesale processed product value based on multiplying retained catch weight by a product recovery rate (primarily H&G Eastern cut) and an estimated wholesale price based on the 1994 processor's annual reports.

Source: Blend estimates of catch, Weekly Production Reports, and Commercial Operator's Annual Report, as of 11/5/95.

3.1 Administrative and Enforcement Costs

None of the alternatives considered would significantly affect administrative or enforcement costs associated with management of the GOA groundfish fisheries.

4.0 REFERENCES

National Marine Fisheries Service (NMFS). 1996. Final Environmental Assessment for 1996 Groundfish Total Allowable Catch Specifications. NMFS, PO Box 21668, Juneau, AK 99802-1668.

National Marine Fisheries Service (NMFS). 1995a. Final Environmental Assessment for 1995 Groundfish Total Allowable Catch Specifications. NMFS, PO Box 21668, Juneau, AK 99802-1668.

National Marine Fisheries Service (NMFS). 1995b. "Interim Report on the Status of the Pacific Ocean Perch Rebuilding Plan in the Gulf of Alaska". Prepared by J. Heifetz, J. Ianelli, and J. Fujioka. Juneau, Ak. April 6, 1995.

National Marine Fisheries Service (NMFS). 1994c. Biological Opinion on the Effects of the North Pacific Groundfish Fisheries on Salmon. January 19, 1994. 28p.

National Marine Fisheries Service (NMFS). 1994d. Section 7 Consultation for 1994 Total Allowable Catch Specifications for the Bering Sea and Aleutian Islands Groundfish Fishery. January 14, 1994. National Marine Fisheries Service, PO Box 21668, Juneau, AK 99802-1668.

National Marine Fisheries Service (NMFS). 1994e. Section 7 Consultation for 1994 Total Allowable Catch Specifications for the Gulf of Alaska Groundfish Fishery. January 14, 1994. National Marine Fisheries Service, PO Box 21668, Juneau, AK 99802-1668.

United States Fish and Wildlife Service (USFWS). 1989. Formal Consultation with the U.S. Fish and Wildlife Service Pursuant to Section 7 of the Endangered Species Act. Biological Opinion. July 3, 1989. National Marine Fisheries Service, PO Box 21668, Juneau, AK 99802-1668.

United States Fish and Wildlife Service (USFWS). 1994. Informal Consultation with the U.S. Fish and Wildlife Service Pursuant to Section 7 of the Endangered Species Act. February 14, 1994. National Marine Fisheries Service, PO Box 21668, Juneau, AK 99802-1668.

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